

Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- High Temperature Soldering Guaranteed: 260°C/10 seconds



Package: DO-201AD

Applications

- Switching power supplies
- Converters
- Reverse battery protections
- High surge current capability
- Free-wheeling



Maximum Ratings and Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	SD945	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS Voltage	V_{RMS}	31.5	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Forward Rectified Current 0.375 ^U (9.5mm) Lead Length	$I_{F(AV)}$	9	A
Peak Forward Surge Current (8.3ms single half sine-wave superimposed on rated load) (JEDEC method at rated T_L)	I_{FSM}	150.0	A
Maximum Instantaneous Forward Voltage at 9 A DC	V_F	0.63	V
Maximum Instantaneous Reverse Current at rated DC Blocking Voltage	I_R	$T_A=25^\circ\text{C}$	0.5
		$T_A=100^\circ\text{C}$	50
Typical Junction Capacitance(Note 2)	C_J	400	pF
Typical Thermal Resistance(Note 1)	$R_{\theta JC}$	3	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Note: 1. Thermal resistance from Junction to Case.

2. Measure at 1MHz and reverse voltage of 4.0V

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG. 1-FORWARD CURRENT DERATING CURVE

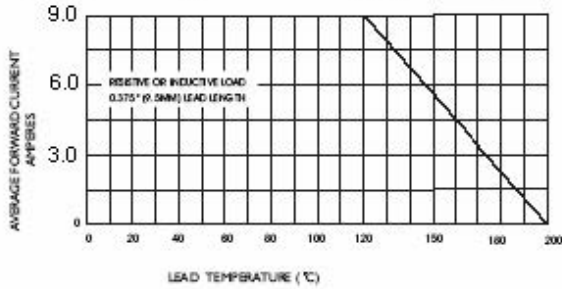


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

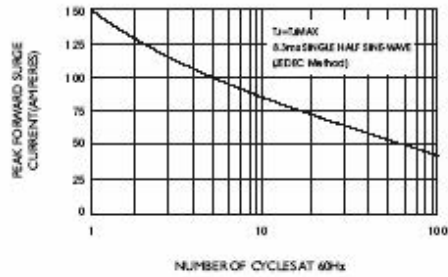


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

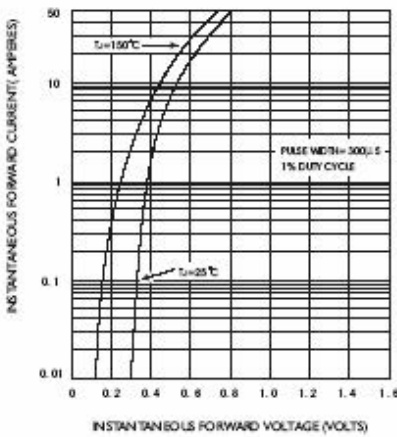


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

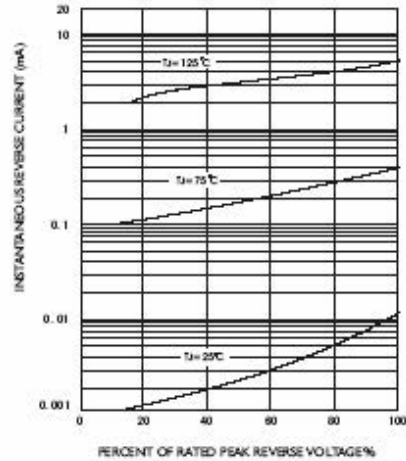


FIG. 5-TYPICAL JUNCTION CAPACITANCE

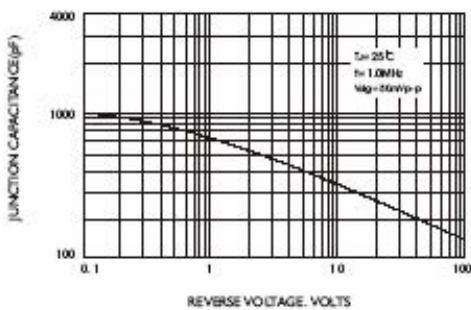
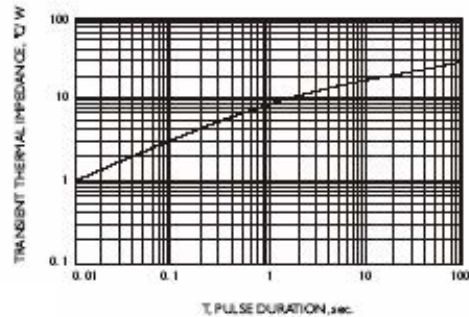


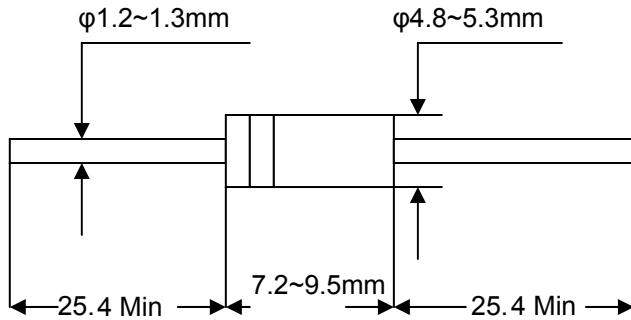
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



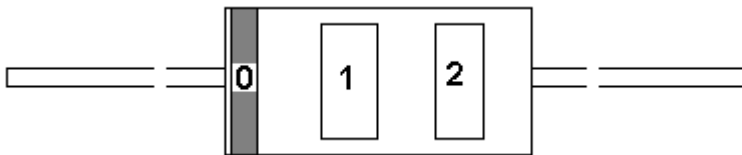
Package Outline Dimensions

in inches (millimeters)

DO-201AD



Marking

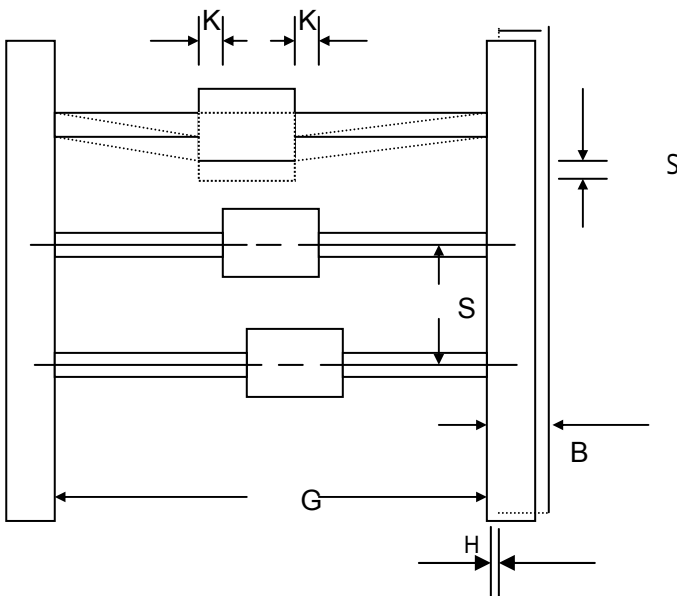


0. Cathode Mark (silver band)

1. Part Name SD945

2. Logo Mark 

Taping Specification



K:0.5mmMAX

S:10.0±0.5mm

S:1.0mmMAX

B:6.0±1.0mm

G:52.4±1.5mm

H:0.8mmMAX